

CLAIMS

1. A biodegradable wax composition mainly comprising a wax, containing a biodegradable polymer and a filler, and having a moisture permeability of $3 \text{ g}\cdot\text{mm}/\text{m}^2\cdot 24 \text{ hr}$ or less at 40°C and 90% RH.
- 5 2. The biodegradable wax composition according to claim 1, wherein the wax is present in an amount of 65% to 95% by weight.
3. The biodegradable wax composition according to claim 1 or 2, wherein the biodegradable polymer has a weight average molecular weight of 200,000 or higher.
- 10 4. The biodegradable wax composition according to claim 1, wherein the polymer is polyisoprene or natural rubber, and the polymer is present in an amount of 5% to 35% by weight.
5. A biodegradable laminate comprising a moistureproof layer comprising the biodegradable wax composition according to claim 1 and a biodegradable base layer on at least one side of the moistureproof layer.
- 15 6. A process of producing a wax composition mainly comprising a wax and containing a polymer and a filler, which comprises the steps of:
 kneading the wax and the polymer to prepare a wax/polymer composition containing the wax as a main component and
 kneading a filler into the wax/polymer composition.
- 20 7. The process of producing a wax composition according to claim 6, wherein the wax/polymer composition comprises 50% to 95% by weight of the wax and 5% to 50% by weight of the polymer, and
 the step of preparing the wax/polymer composition comprises a first kneading substep to prepare a masterbatch comprising 5% to 45% by weight of the wax and 55%
25 to 95% by weight of the polymer and a second kneading substep in which an additional amount of the wax is added to the masterbatch followed by further kneading.

8. The process of producing a wax composition according to claim 7, wherein the first kneading substep is carried out by kneading the wax and the polymer at a temperature lower than the melting completion temperature of the wax.

5 9. The process of producing a wax composition according to claim 7 or 8, wherein the first kneading substep is carried out by putting the whole amount of the polymer in a kneader all at once and then adding the wax thereto in divided portions.

10. The process of producing a wax composition according to claim 9, wherein the divided portions of the wax each range from 1% to 15% by weight of the whole amount of the polymer.

10 11. The process of producing a wax composition according to claim 9, wherein the portion of the wax increases gradually with the number of times of adding the wax.

12. The process of producing a wax composition according to claim 7, wherein the first kneading substep is carried out by kneading the wax and the polymer in a batch kneader, the total amount of the wax and the polymer to be put in the batch kneader
15 being 60% to 100% of the capacity of the kneader.

13. The process of producing a wax composition according to claim 7, wherein the second kneading substep is carried out by kneading the wax and the masterbatch at a temperature lower than the melting completion temperature of the wax.

14. The process of producing a wax composition according to claim 7, wherein the
20 second kneading substep is carried out by putting the whole amount of the masterbatch in a kneader all at once and then adding the wax thereto in divided portions.

15. The process of producing a wax composition according to claim 14, wherein the divided portions of the wax each range from 5% to 30% by weight of the whole amount of the masterbatch.

25 16. The process of producing a wax composition according to claim 14, the portion

of the wax increases gradually with the number of times of adding the wax.

17. The process of producing a wax composition according to claim 7, wherein the second kneading substep is carried out by kneading the wax and the masterbatch in a batch kneader, the total amount of the wax and the masterbatch to be put in the batch kneader being at least 60% of the capacity of the kneader.
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